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ITEMS OF INTEREST.

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Notes from the Profession.

PYORRHEA ALVEOLARIS.

A TRIPLE ALPHABET.—BY MRS. M. W. J.

Aurora Borealis, the latest popular re-christening of Pyorrhea Alveolaris, is quite as suggestive of the disease itself as the name we have hitherto accepted.—*G. A. Bowman.*

Atrophic Dyspepsia of the connective tissue is the first step in this disease. * * The reason we don't understand these expressions of disease is because we have been looking at the mass of tissues and not at the molecules which constitute them.—*W. H. Atkinson.*

A fractured bone that has opportunity to wiggle all the time will not unite; so with loose teeth. Unite them thoroughly to firm teeth by fillings, wires, or bars, and the weak teeth will do better than without such support.—*W. H. Atkinson.*

Bridgework can be anchored to teeth in the last stage of Pyorrhea Alveolaris and the patient have the benefit of the bridge, while the teeth, being held firmly in position, will be brought into healthy condition.—*M. L. Rhein.*

By devitalization, the source of conveyance of the predisposing cause is removed. A pulpless tooth is forever free from Pyorrhea, while a tooth with living pulp is always subject to the same influences that caused the disease in the beginning.—*Geo. W. Miller.*

Bibulous paper, smeared with a paste of tannin and glycerin, placed around the teeth, prevents injurious action on the mucous membrane of sulphuric acid injected into the pockets.—*Atkinson.*

Caustic Paste. One and a half to two parts caustic potash and one part carbohc acid crystals, mixt dry in a mortar set in boiling water, makes a dry paste, which, if broken up with tweezers and laid around the teeth when an eschar is needed, will limit the pocket, and protoplasmic exudate will form a clot securing new growth of tissue.—*Wm. H. Atkinson.*

Constitutional Treatment. A 2-grain pill of sulphate of cinchonidia night and morning. If nervous, one pill a day, McKesson and Robinson's Nux Vomica, phosphorus, and cantharides pills. Cruorin, or the red blood corpuscle, is so nearly like the sulphate of cinchonidia that no chemist can tell the difference; and cinchonidia is apparently readily convertible into red corpuscles; hence its value in the treatment of Pyorrhea Alveolaris.—*Atkinson.*

Chemically pure sulphuric acid fulfils three requirements. 1st, dissolving any undetached scales of tartar; 2d, removing points of necrosed alveolus; 3d, stimulating blood to the depleted tissues and healing them by first intention.—*J. R. Bell.*

Deposits may be removed from any loose teeth by means of a very delicate long-bladed spicula forceps—one end resting on the incising edge of the tooth to steady it.—*Wm. N. Morrison.*

Dietetic Regimen. Anti scorbutic, viz., fresh meats, pickles, free use of lemons with such vegetables as onions, cabbages, turnips, radishes, mustard, carrots, sauerkraut, etc. Mild laxatives and once in five days the application of an agent that is caustic, astringent and stimulating.—*J. G. Templeton.*

Doses. Antipyrin, five grains, repeated hourly, is valuable when neuralgic symptoms accompany an aggravation of Pyorrhea Alveolaris from "taking cold."—*Ottolengui.*

Exudation of vitiated fluids into the pus pockets—the real cause of the first symptoms of the disease—is arrested by the scaling and scraping process, by which a traumatic condition is produced, aided by the escharotic effect of the remedies and closing the mouths of thousands of minute vessels.—*Geo. W. Miller.*

Equal parts chloroform, oil of cloves and tincture of aconite, applied on cotton, forms an excellent application for the gums.—*W. J. Kulp.*

Eaters of much meat are, as a rule, most subject to diseased gums. Removing the deposits, cleansing the inflamed pockets with antiseptics, changing the diet from meat to vegetable, will, in a majority of cases, restore the tissues to a healthy condition.—*J. R. Bell.*

For the thorough removal of deposits an assistant is indispensable to spray the pocket with a tepid solution of bichlorate of mercury—1 gr. to 1 pint of water—removing all the foreign particles from the bottoms of the diseased pockets, sterilizing the soft tissues, relaxing the tissues so that the small sinuses are cleansed of their contents.—*J. R. Bell.*

Fine soft sponge sterilized with the $\frac{1}{1000}$ solution of mercuric

bichloride, dried and cut into plugs and points of different sizes, and kept in closely stoppered bottles, will be found valuable for the application of remedies.—*John Holt*.

First, see that the teeth are clean; then thoroughly wash out the pockets with a germ-destroyer; stimulate with the carbolic acid and potassa mixture, followed by a soothing dressing of glycerin and tannic acid. This is in most cases all that is required.—*N. Y. Trans.*

Glycerin and tannin consistency of butter—heating the glycerin, by which it will hold double the tannin—is efficacious as an astringent, a local stimulant, and an anesthetic. *Ottolengui*.

Gum is an embryonic tissue, and has reparative powers far above those of other tissues; consequently wounds in gum-tissue will heal, and lost parts be restored.—*Atkinson*.

Germicidal application in Pyorrhea Alveolaris; mercuric-bichloride in hydrogen-peroxide 1 to 500.—*M. L. Rhein*.

Hollow-tube platina points, attached to a special hand-piece which is connected with an atomizer containing naphtha, the point being heated over an alcohol flame and kept at white heat from the naphtha; is used in the thermo-cautery treatment of Pyorrhea Alveolaris by *C. A. Timme*.

Hold loose teeth firmly in position while reproduction of tissue takes place. This can be best done by cutting grooves in the loose teeth and adjacent firm ones on each side, forming a continuous gold filling all round.—*M. L. Rhein*.

Home hygiene is a most essential feature in the treatment of P. A. Without the intelligent co-operation of the patient, zealously given, nothing can be accomplished.—*Ottolengui*.

If the gingival margin is left intact and uninjured we may expect attachment between the cement and the peridental membrane even of a dead tooth; but just so far as the margin of the gum may have receded from its normal position just so far will there be no re-formation of the peridental membrane.—*S. T. Maxwell*.

It is, and it is not, local; it is, and it is not, constitutional; in diagnosis now you see it, and now you don't. If you can cure it, it is inflammation caused by calcific deposits; if you can't cure it, it is Pyorrhea Alveolaris.—*"Aftermath," Ohio Journal*.

Its etiology is hidden in mystery; its course is surrounded with uncertainty, and very unexpected results are often seen.—*W. C. Barrett*.

Jonathan Hutchinson, comparing Pyorrhea Alveolaris with Sycosis—a disease of the hair in which suppurative inflammation attacks the

hair follicles which causes the hairs to drop out—considers that the local inflammatory theory explains all the conditions in both cases.

Join loose teeth to firm ones, in the molar region, by rapidly-setting copper amalgam filling over a platina-and-iridium bar, laid in grooves cut in the teeth; the bar is held in place by a Howe screw at each end.—*Ottolengui*.

Just in proportion as patients are well endowed with poor blood crisis, is there need of constitutional treatment; nutrition is its only means of cure.—*Atkinson*.

Kill the spores and their products, so that physiological activities may throw off the offensive and effete matters and reproduce the tissues normal to the location.—*Atkinson*.

Kansas city *Patterson* (*J. D.*) thinks that Pyorrhea Alveolaris is a true catarrh of the oral cavity, and cites in proof the identical character of the deposits.—*Dr. A. W. Harlan*, on the other hand, says that the deposits differ in every characteristic.

Localization of systemic debility. The three stages of this affection must be met by three degrees of extirpative energy—physiological, mechanical, chemical.—*Atkinson*.

Local treatment is more efficacious than constitutional; its direction should be to dry up the secretion of the contagious pus.—*J. Hutchinson*.

Loose teeth are strengthened by fitting a narrow band to each tooth, linking the bands together with solder and cementing the string of bands to the crowns of the teeth.—*G. W. Nichols*.

Make a powder of boracic acid 1 dram to chalk 1 oz. to be packed around the teeth night and morning, first syringing around the roots with equal parts aromatic sulph. acid and water.—*Genese*.

Missing Link.—*Dr. Harlan* thinks there is a "missing link" between the cases cited and the theory advanced by *Dr. Patterson* as to the catarrhal nature of Py. Al., but hopes he may find it.

Make a 1 to 7 dilution of Aqua Regia in water for use when there is considerable loss of connective tissue between tooth and socket, with deposits.—*Atkinson*.

Never operate on very loose teeth; invest them solidly with a thick coating of oxyphosphate, thus rendering comparatively painless the otherwise almost unbearable operation of cutting grooves through the incisive edges, through which a bar is solidly built, holding the teeth rigidly in position.—*Ottolengui*.

Neuralgic symptoms yield readily to small doses of antipyrin or antifebrin, the former being the safer remedy.—*M. L. Rhein*.

New and healthy tissues are the result of stimulating applications. Robinson's Remedy promotes this growth, after destroying the superficial structure.—*M. L. Rhein.*

Oil of cinnamon, two parts to one of carbolic acid, applied every three or four days, acts as a stimulant, the mouth being rinsed frequently with Listerin slightly diluted.—*F. S. Maxwell.*

Oxyphosphate, used as an investment to "steady" loose teeth, should be mixt quite thin and allowed to run in between the teeth literally enclosing them, and forming a wall on the lingual and labial sides from a fourth to half an inch in thickness.—*M. L. Rhein.*

Often Listerine or Hydronaphthol, applied with a spray-apparatus, used frequently, will force cleanliness on a patient aside from the action of the drug itself, the most unpromising cases often yielding with remarkable readiness.—*Ottolengui.*

Pure sulphuric acid, 1 to 7, is preferable to aromatic sulph. acid. Sometimes chloride of zinc or caustic potash and carbolic acid acts better than sulphuric acid. Expose a good, clean surface of living tissue, from which plasm can flow out, and granulation will take place.—*J. Taft.*

Physiological treatment—good feeding and hygienic cleanliness; mechanical treatment—removal of all foreign material; chemical treatment—the destruction of ferments and their results.—*Atkinson.*

Pyorrhea Alveolaris seems to depend on some nervous nutritive control of the mucous membrane and ligamentous tissues of the mouth; the trophic centres presiding over these tissues seem to be in an abnormal condition.—*E. C. Kirk.*

Query.—When is it really Pyorrhea Alveolaris? How often do the conditions warrant the use of this term, rather than calcic inflammation or phagedenic pericementitis?—*J. G. Templeton.*

Query.—Is it ever cured? *Dr. Frank Abbott* says the normal conditions of the parts are never restored; the same primary conditions existing, the same results will recur unless the case is followed up and treatment repeated every few months.

Remove all debris; wire all loose teeth; syringe with peroxide of hydrogen; stimulate with carbolic acid crystals, 2 parts, oil of wintergreen 3 parts, twice a week; use Listerine as a mouth wash.—*W. F. Fowler.*

Remove all calcarious or serumal deposits; arrest hemorrhage with hot water; apply pure, finely pulverized sulphate of copper, washing out with hot water, repeating as found necessary.—*J. G. Templeton.*

Remove all deposits; syringe with aromatic sulphuric acid; pack in the following powder:

Prepared chalk.....	2 oz.
Lac sulphur.....	1 oz.
Borate soda.....	½ oz.

—*John C. Storey.*

Syringe with permanganate of potash, as a disinfectant; apply a saturated solution of crystals of iodine in wood creosote, as a stimulant; coat with a thick solution of tannin and glycerin as a protection to granulation tissue.—*R. B. Adair.*

Secure the clot in place long enough to enable it to be metamorphosed from protoplasm to embryonal corpuscles, myxomatous, connective, neural, vascular, and epithelial tissues, beneath which new osseous growths will reproduce the sockets of the teeth.—*Atkinson.*

Spray with hydronaphthol and water, applied with an atomizer with sufficient force to lay the gum tissue away from the neck of the tooth, so you can see the pocket; this forces the blood from the pocket and leaves the neck of the tooth slightly exposed to view, so that you can see any particles of debris left behind.—*Van Woert.*

The name, Pyorrhea Alveolaris, is only given to that stage of the catarrhal condition that attacks the gum and alveolar process, when it has reached the suppurative stage.—*W. X. Sudduth.*

There is no doubt that the disease is due to fermentation produced by bacteria. The treatment should be antiseptic, after removing every particle of the irritating cause—calculus deposits.—*F. T. Clarke.*

The etiology of true pyorrhea is endless. One is sure that it comes from a catarrhal condition; another is positive that it is due to a gouty condition; another that it is the result of a malarial condition. In fact, we can get pyorrhea from almost any derangement of the general system.—*M. L. Rhein.*

Under stress of disease, in the breaking down of tissue elements, the acids requisite to holding lime in solution are deficient in supply, or brought into contact with bases for which they hold higher affinity. Hence the deposits.—*Atkinson.*

Use of the spray apparatus with various drugs gives deeper action in shorter space of time, and avoids lessening the strength of the medicine by the fluids of the mouth.—*Ottolengui.*

Unite loose teeth to more firm ones, making them as immovable as possible; then remove all deposits; then use antiseptic, astringent, and in some cases anesthetic medicaments.—*Ottolengui.*

Very loose teeth must be held in immovable position when reproduction of tissue is certain to proceed. Binding wire or other forms

of ligation are uncleanly and too temporary. Unite a sufficient number of teeth permanently together.—*N. Y. Trans.*

Vitriol (elixir of) is the proper application with slight loss of gum border to effect the purpose of inciting a return to physiological activity.—*Atkinson.*

Very few real cases—like cancer among the medical profession; a fellow will advertise that he has cured any number of cases of cancer, but he cures only what he calls cancer. So of Pyorrhea Alveolaris; there are very few real cases.—*F. T. Clarke.*

Whether it be that uncleanliness produces Pyorrhea Alveolaris, or simply promotes it, it is worthy of note that a large number of cases have been cured by bringing the patients to an appreciation of hygiene.—*Ottolengui.*

Whether Pyorrhea Alveolaris or not, it is a retrograde metamorphosis by which dissolution of the continuity of the tissues takes place ** and this does not take place except in the presence of some microbe, tho we cannot yet discriminate the different kinds of bacteria that contribute to this retrograde action.—*Atkinson.*

What appears to be an alveolar abscess may occur in connection with a live tooth, with Pyorrhea Alveolaris as the cause. This may be relieved without opening the tooth and destroying the pulp—opening the sac externally.—*Ottolengui.*

EXudations of vitiated fluids from both the tissues within the dentine and the capillary vessels of the pericementum—due to a lessening of the vitality of the dentinal fibrille, and to a loosening of the periodental membrane from the cement—constitute the first symptoms of pyorrhea.—*Geo. W. Miller.*

You may state to your patient, with the utmost assurance, that the disease can be checked, teeth tightened and parts restored to nearly their normal condition, when there is a scorbutic tendency characterized by livid spots varying in size, paleness, languor, depression of spirits, fetid breath, spongy and bleeding gums, etc.—*J. R. Bell.*

You must first effect a cure of uterine difficulties, or you will in vain attempt a cure of Py. Al.—*J. S. Bryant.*

Zinc-iodide.—Where there is much recession of the gum, make an incision a little below the border, in which insert crystals of iodide of zinc; this will irritate the gum and push it up on the tooth. Repeat the operation several times, or until the gum reaches its natural position on the tooth.—*A. W. Harlan.*

Zinc-chloride.—In calcic pericementitis with absorption of the alveolus, use a 30 per cent solution of chloride of zinc under the free margin of the gums.—*F. S. Maxwell.*

AMALGAMATING GOLD SECTIONS INTO THE CAVITIES OF TEETH.

DR. C. H. LAND, DETROIT, MICH.

Coincident with the introduction of the porcelain process of filling teeth with sections of porcelain, I also practiced the art of substituting gold and other metals in the place of porcelain on the grinding surface of the teeth. When the cavity is shallow and greater toughness is required, gold will be the most admissible. The process is essentially the same as with the porcelain. Platina foil is burnished or swaged into the cavity of the tooth to secure an impression, which forms a matrix or mold; then, by fusion, gold or any other suitable metal may be run into the matrix to form a solid section or plug. When completed this corresponds to the lost portion of the tooth. The fusing of the metal may be done by means of the ordinary blow-pipe. In the course of my experiments I have found that after the gold has been molded into a section, it is advantageous to grind off the major portion of the platina lining; this exposes the surface of the gold and presents a condition more favorable to unite with the amalgam. The cavity is first lined with a thin coating of amalgam, then the section is coated with a small amount. When it is ready to insert, a slight malleting will drive the section to its proper adjustment and force out any surplus amalgam. Floss silk is used to tie the section in all proximal cavities and hold it while the amalgam is hardening. The section and the amalgam are then practically one compound plug. This method does away with the unsightly appearance of large blocks of amalgam, reduces the liability of shrinkage, secures the preserving qualities of the mercury as a germicide, and its ready adaptation.

To those who are advocating the use of copper amalgam this new method may be of special interest. I have found it thoroughly practical to adjust sections of gold into a great variety of cavities, and when completed it is difficult to discover they have been amalgamated in place. The use of the rubber dam is seldom required, and the long and tiresome malleting process is dispensed with.

ITEMS.

To keep vulcanizers from blacking, use a piece of sal soda the size of a walnut in the vulcanizer just before closing. It makes flasks so easy to clean that after once using none will do without it.

To get a good impression of high arched mouths, cut a hole the size of a five cent piece in the centre of impression cup, lay a small piece of the cloth over the hole, and after the plaster is pressed up, take the finger and press in the hole, to be sure that the high part of the arch is reached.

O. M. GRAVES, North Yaking, W. T.

CAMPHO-PHENIQUE.

The new and popular antiseptic combination of Phenol and Camphor has been introduced into hospitals and adopted in private practice throughout the country.

Waldo Briggs, M. D., St. Louis, Mo., writes: I have used Campho-Phenique for some time in my private practice, and at my clinic at Beaumont Hospital Medical College, and am much pleased with its action as an antiseptic anesthetic surgical dressing. I have had the most excellent results with it in caries and superficial neuroses, using it pure or dissolved in various proportions of oleaginous matter. Suppuration was controlled, the removal of sequestra facilitated, and recovery hastened in a remarkable manner. I consider it the most valuable of all the additions of modern chemistry to surgical therapeutics.—*N. A. Railway Surgeons.*

PREPARING AMALGAM.

Some dentists will tell you amalgam should always be washed, and others, who seldom wash it, will claim this is unnecessary. I am inclined to think the difference in their observation is not so much in the cleanliness of the amalgam as in the quality of the alloy before it is mixt with mercury. I prefer, in my own practice, to use the gold and platina alloy, thoroughly rubbed up with the mercury, avoiding an excess, packing the alloy in small pieces, and gently tapping with the plugging instrument, being careful, as the filling progresses, to wipe off the surface with bibulous paper or absorbent cotton if it appears to contain a larger amount of mercury than it should. This is very important toward the last, if you wish to get the best results from your filling, especially at the margins.—*Dr. W. W. Vance.*

Some people are disposed to sneer at inventors and patents. Don't do it! Nine-tenths of the material prosperity of this American Union is due to inventors and their patents. A volume would not suffice to relate the many obligations we owe to the men whose patient investigation and ingenuity have cheapened processes and lessened labor for this prosperous people. Rather let us remove our hats before the man who has devised a machine by which we may get bread with less sweat.—*Safety Valve.*

A Sad Accident.—A note from Mrs. J. W. Walker (Mrs. M. W. J.) immediately after her arrival home, to which she was called from a visit to us, by telegram, informs us of the accidental shooting of her daughter, Miss Flora, which will prove fatal. Mrs. W. will have the deepest sympathy of the whole profession.—*Southern Dental Journal.*

LEAD CONES FOR ROOT FILLING.

History so constantly repeats itself that it almost ceases to be wonderful. Of late lead cones have come to the front again, to have their praises chanted for their antiseptic properties in restoring abscess roots to health. Several years ago Dr. Peabody, of Louisville, Ky., started this method in a paper, published in the *Dental Register*. These cones were recommended as especially valuable in apical foramen troubles; that the therapeutic advantages of lead gave cures to abscesses where all other remedies were total failures, and the ready adaptability of the material itself made it easy and perfect in closing the foramen of a root.

The doctor did not formulate any theory by which the healing processes were brought about, but knew that whereas other remedial agents had failed, lead cones achieved success. All the bullet-carrying people were recalled to mind and their exemption from harm, added to the suggestion that lead must be a valuable material in tooth roots as well as in bodies. Your correspondent became one of its experimenters. Our methods of treating root abscesses then were more empirical than now. We did not know then so well the importance of closing perfectly the apical foramen. Our remedies in the treatment of abscesses were too heroic, and often protracted the disease instead of curing it. Lead cones at this juncture of affairs may have been beneficial compared with what we have at our command to-day. Repeated trials of this method and awaiting observations concerning results, showed some mischief, that led me to abandon its use altogether. In those white and pearly incisors, with roots filled with lead, after a time became tinged with blue at the gum margin. A few cases of this kind came under my observation, and had to be repaired by removal of filling. What the experience of others may have been with lead cones no knowledge has come to me. Only my own experience is herewith presented. But so long as diseased roots have more or less saturation permeating the tubuli and carried to the enamel, an oxide so discoloring is not inviting to a continuance of lead cones. Nor will it be presumed that when the apical foramen is closed with lead the canal or pulp-cavity is absolutely free from every particle of moisture. There may be but a trifle, only enough to blacken the lead, which in course of time gives a darker tinge to the tooth at the gum margin. Hence it is my opinion that lead cones as a root filling is not to be commended. With our multiplied resources increasing from day to day, it would indeed be strange if we had not some better material than the one here named. Cones of tin are much preferable without the liability to oxidize.

W. F. M.

STEVENS' REMOVABLE BRIDGE.

DR. A. J. STEVENS, FORT SCOTT, KAN.

Prepare the roots in the ordinary way, and fill the end of the root with lead or any other material to suit.

Enlarge the canal below this filling, so that when a screw-post is inserted it will point inward as much as possible. With a Howe screw-tap cut a thread; but if the canal is too large, with a wheel-bur, cut a shoulder up in the canal and fit the canal below, so that a paralleloiped nut can be placed in the groove cut by the wheel-bur and turned one-half around, so as to receive the end of the screw-post; smooth the end of the root to the gum and bevel the labial or buccal part of the root under the gum.

Now make a gold cap with a bevel to *fit* the end of the root, and drill a hole in the cap, near the lingual border, a little larger than the post. With a gold or platina screw-post insert and screw home, marking it to cut off about one-quarter inch below the cap; also mark at the top of the cap and bend the post so that the part outside of the root will stand plumb with the other teeth, or, what is better, at right angles with a plane of the gingival border.

Dry the canal and insert a little thin oxyphosphate and screw the post home; then fill the canal with oxyphosphate and adjust the cap. Now take an impression, insert the platina pins about the same size as the screw posts, and run the model.

When done carefully, your model will exactly represent the space to be filled with the bridge, with the cap roots and pins in position. Now place the model in your articulator and articulate the teeth as usual. When a pin is reached cut a piece of *thin* platina as large as the top of your cap, punch a hole and slip it over the pin. Now bevel the tooth so that it fits the beveled portion of the cap. This conceals the gold cap. When the tooth is waxt in position, cut a strip of *thin* platina to form a semi-lunar band, passing from the backing of the tooth around the periphery of the cap, thus forming a little cup which may be filled with wax. When all the teeth are articulated, invest in the usual way for soldering.

Now pick out the wax carefully, heat up and solder, as in any other similar case. When you get to one of these caps fill it up with solder. Now cool and remove the investment, with a drill cut out the platina pins and countersink, polish and adjust. When in place, put the gold nut on the end of the screw post and tighten.

When a tooth breaks, the nuts are easily removed, and the bridge taken off. I find this the easiest, simplest, and most satisfactory way for me to construct a bridge, and the advantage in cleanliness is inestimable.

WHITHER ARE WE DRIFTING? *

BY C. B. HEWITT, D.D.S., KANSAS CITY, MO.

The tendency of our age is to fly from old established customs and chase after every new theory without a thorough investigation into the merits of the case.

"Try all things, and hold fast to that which is good," is a maxim as safe as it is old, as blunders cost us our patrons' good will, and cost them their comfort for life. It is much easier to go slow,—be sure you're right, then go ahead,—than to have to retrace our steps and acknowledge we have been mistaken. Let us follow the path of the dental profession for the last quarter of a century. We can easily do it. There are plenty of landmarks. The way is blazed in many a mouth, that "he who runs may read." We will go back to the days of soft foil and amalgam. Now witness the first stampede when the discovery was made that gold was cohesive, or sticky, as they called it then. In a few years thereafter there were more golden monuments built than will ever be again. And with this came the wholesale tirade on amalgam.

Pictures more ghastly than had ever invaded the sacred precincts of our young but proud profession, came floating from every quarter of the civilized globe; how thousands were being hurried into untimely graves by the deadly mercurial poison. The serious question presented itself: Are we a profession of murderers, and will the spirits of the martyred to science return to haunt us?

These, with the stigma of our own professional brethren, who "never did use the miserable stuff," came in quick succession across our pathway to heap discomfort on the head of the average practitioner. And yet he had his poor patients who could not pay for gold. He had teeth so badly broken down that he had not the skill to fill them with gold. What should he do; run the risk of sending one of his confiding patrons to try the realities of an unknown world, and make a few shekels for self, by filling them with amalgam, or pass them along down the river of time, toothless or unhappy in the possession of artificial dentures?

These were some of the trials at this juncture of our profession. Such a state of things could not last; the conservative element asserted their authority and demanded a hearing. The pendulum had swung too far, and was now returning. The enthusiast had had his day. It was found on further examination amalgam *had not* filled all the cemeteries, but instead, had saved thousands that were already dead from destruction, and restored them to many years of usefulness,

* Read at the eighteenth annual meeting of the Kansas State Dental Association, Topeka, Kas.

while many of the teeth with golden monuments had been pounded to death; and that which was once the joy and pride (on account of cost and suffering) was the cause of much discomfort to the owner. After much harm had been done by the abuse of amalgam, and the over-confidence in cohesive foil, we returned to our normal condition somewhat wiser for the experiments, it is true, as we could relegate the different materials to their proper places, and all realizing that no one of them filled all the requirements of tooth-savers, amalgam saving thousands that would be lost but for it—some on account of the finances of the patient, and some on account of the condition of the teeth.

Both soft and cohesive gold have found their proper places, and are no longer contentions. One is content to fill the mission of close adaptation to the walls of the cavity, while the other will protect it from the service of mastication. Great as had been the progress up to this point, there were still other steps to lighten our burden as dentists formerly doomed. I refer to crown-work, one of the great steps in advance our profession has made in late years. And from this came the idea of bridging from one crown to another; a beautiful piece of work, but generally a most diabolical piece of dentistry. Some dentists are going crazy.

I know of no words of praise that would do justice to the ingenious brain and the skilled hands that so wrought out these difficult tasks and laid them before the profession so plainly that all may utilize them. And now comes the danger again, judgment is abandoned, teeth must be crowned, a veritable "Oklahoma" in dentistry has opened up, and all must rest secure on the claim of having crowned many teeth. This is the latest thing, and all must take a hand at it. And just here I think a note of warning is demanded. There is a fascination about crown-work all will admit. It is showy, and pleases the patient; it is expensive, and pleases the dentist; and hence a molar is elected to wear a crown, when a filling would be better. We are called on to answer the many questions propounded by young men on entering our colleges. The all-important point with them is, does the school teach crown and bridge work? if so, it will suit. They do not ask, do you teach how to arrest superficial caries? They do not ask, do you teach how to prepare a cavity and insert a filling that will prevent further destruction of tooth-structure and insure comfort to your patient? They do not ask for information on important subjects coming under the dentist's care in every-day practice. Works of utility are thus substituted for works of fancy.

I am impressed with the belief there will soon be more crowned heads in this free republic than in any other nation on the globe, and

fully as many blunders in the proper subjects for crowning. My attention has been called to specimens of dentistry, both operative and crown and bridge work, from one of these dentists where the crown-work was beautiful, and the fillings, both gold and amalgam, were simply wretched.

I do wish to impress the fact on the younger members of our profession, and those contemplating the study of dentistry, that we still have teeth to fill, some with gold, some with amalgam, and some with the cements or gutta-percha. It is your duty to not only know how to use all these different filling materials, but to know *when* and *where* and *how* to use them, that your efforts may be the greatest blessing to your patients. We will find hundreds of teeth to be filled for one where a crown is demanded. Another step in advance has following in its wake the enthusiast that goes blindly on without thinking, because it is the latest thing in dentistry. I refer to immediate root-filling, in many cases an admirable practice, and in many others a patient would have good grounds for a case of mal-practice. Would it not be better to be a little more conservative, and not throw aside the old so flipantly till the new has proven by experience to be the better? — *Western Dental Journal*.

A FEW NOTES OF DENTISTRY IN SIAM.

BY A LAYMAN.

It is perhaps doubtful whether any special interest would attach to, or whether any practical value would result from an account, rendered by an expert, of the state of dentistry in such a remote and little known country as Siam. When, however, this is attempted by one who can only claim that objective acquaintance with dentistry which he has obtained—by hard experience, it is true—in a dental chair, it is needless to expect that the profession can take more than a passing interest in the question. The few observations which will be made must therefore be necessarily short.

As so little is usually known by most people about Siam, I may perhaps be allowed to state a few brief facts concerning the place. Siam, or Thai, as it is known to the natives, covers an area of about 250,000 square miles, and the population is 6,000,000. The capital of the country is Bangkok, on the River Menam, with from 400,000 to 600,000 inhabitants. These consist chiefly of Siamese, Chinese, Laotians, and Malays. Europeans in Bangkok, now number about 400. The nationalities are English, Germans, French, and Danes. Among these the prevailing language is English.

The Asiatic population differ considerably in appearance, manners and customs, and as a rule they live in distinct parts of the town.

Of the Asiatic foreigners in Bangkok, by far the most important is the Chinese. The small trades and industries are mainly in their hands, and as is generally reported of them in other countries, they are in Siam a most industrious and hard working class. The Chinese for the most part live on the water-side, in boats, floating houses, and in houses built on piles fixt on the margin of the river. They effect transit from one to the other in boats, and often are seen vending their wares in boats, which are rowed past the houses in a somewhat similar manner to that employed by the itinerant coster in London streets. The river Menam forms the chief and almost the only thoroughfare of Bangkok. With its riparian dwellings shaded by luxuriant trees, with its boats, steam launches, Chinese junks and shipping, it presents an animated appearance. The Siamese live very much in the same manner on the banks of the Menam, but a large portion of the inhabitants, the aristocratic portion, as they consider themselves, live within the city walls near to the King's Palace.

Some Chinese appear to have white, regular and well formed teeth. The younger Chinamen who are brought into contact with Europeans are specially noted for this. But by far the larger portion of the Chinese, on account of the habit they have of chewing the betel-nut have black teeth, and dark red mouths. Both male and female are addicted to this habit. It would be interesting to know whether the betel-nut is preservative or destructive to the teeth. The natives are of opinion that it preserves them, and they say that after the tooth is properly colored, decay is nearly impossible. The Chinese have native doctors, and dentists are not unknown among them. But their duties simply consist of extracting teeth, and alleviating pain arising from decay. As to what may be called constructive dentistry, it is practically unknown to their native dentists. Yet, in spite of their want of skill, such native dentists as the Chinese have managed to retain the patronage of their compatriots. Their establishments are not by any means inviting in external appearance, and in point of establishment and social position, the dentists among them rank about on a par with the barber, and in some cases the professions (?) are joined in one person. I was given to understand that a Chinese dentist in Singapore who, rejoiced in the name of Yang Lock Jau, combined to some extent the duties of the two callings, but was chiefly, as might be inferred from his patronymic, of the dental profession.

Betel-nut chewing appears to be more rife amongst the Siamese than among any of the other nationalities settled in Siam, and black teeth are considered by them beautiful. In defense of this peculiarity they say that a monkey has white teeth, from which it is to be inferred that man should have black ones. Whether this is the justification

entertained by all who observe the custom of the country cannot be determined, but it is a matter of astonishment to all Europeans how universal the habit has become among the natives of the country. From the highest to the lowest—princes, ladies of high degree, noblemen, and commoners—all indulge in this national weakness, and it affords to the richer classes a means of rivalry among each other in the costliness and beauty of their betel-boxes. As the public taste seems to have been so universally perverted with regard to what constitutes beauty in teeth, it follows that a dentist in Siam, to succeed among the native populations must be provided with black artificial teeth, which, I am told are in great demand with certain rich ladies in the city.

Among the European population medical practitioners chiefly practice dentistry. There are, however, a few visiting dentists who attend in Bangkok during certain months of the year. These usually emanate from Hong Kong, Singapore, and Colombo, as they do not find Bangkok sufficiently remunerative to induce them to take up their permanent abode there.—*Dental Record*, England.

PYORRHEA ALVEOLARIS.*

BY GEO. W. MILLER, DES MOINES, IOWA.

That the predisposing cause of pyorrhœa alveolaris is not in the periodontal membrane or the alveolar, but must be looked for in some other tissue, is proven by the fact that when the tooth affected is extracted, the symptoms at once begin to lose their identity, and are in a very few hours lost in the traumatic socket of the late offender. This being true, we must turn our attention to this organ, and if possible try to find a feasible reason for the conclusion that through the living tissue of the human tooth is conveyed the predisposing cause of pyorrhœa.

The living tissues of a tooth, to some, means nothing more than the pulp. They fail to comprehend the fact that there are such things as dentinal tubuli, interglobular spaces, lacuna and canaliculia, and that these are filled with fibrils of living tissue, connected on the one side by the periodontal membrane, on the other by the pulp. Whenever the vitality of the fibrilla is lessened to such a degree that the circulating fluid contained therein becomes vitiated, there is a letting go, a loosening of the periodontal membrane from the cementum, an exudation of the watery portion of the blood from both the tissue within the dentine and the capillary vessels of the pericementum. From the irritating influence of this exudation are formed the first symptoms of pyorrhœa.

Soon after the parting of the gum from the tooth, there is a deposit of serumal calculi, which, in point of time, is secondary, and of course cannot be the cause of the disease as some suppose.

* Read before the Iowa State Dental Society, May, 1889, at Des Moines, Iowa.

The idea that the condition for the development of pyorrhœa is dependent on the vitality of the pulp, was first brought to my mind a few years ago by my worthy colleague and true friend, Dr. Hughes, who asked me if I had ever seen a pulpless tooth affected with this disease. Not having seen one I determined to find one if possible, but to this date my search has been in vain; but I found that teeth whose pulps were devitalized before, or after the beginning of the treatment for this disease, required less time to assume a healthy condition than those that were alive.

By devitalization the source of conveyance of the predisposing cause is removed. The dentinal tubules are no longer supplied with fluid to fill them, the tubuli are purified by antiseptic treatment, the pulp canals filled, and the peridental membrane, where attached to the cementum, is allowed to rest from the force of the capillary circulation from the pulp through the tubuli of the dentine.

The gums and alveolar process proceed at once to recover, because there is no more irritation from the breaking down of the peridental membrane. A pulpless tooth is forever free from pyorrhœa, while a tooth with a living pulp is always subject to the same influences that caused the disease in the beginning, it matters not how successfully treated. Recurrence of the disease may be looked for at any time.

The question naturally arises, how do you account for the healing of the gums and alveolar process around a tooth with pyorrhœa from the ordinary treatment, where the predisposing cause comes from within?

The usual treatment is, first, cleansing the root from all deposit of serual calculi, by scaling the surface of the cementum with a sharp instrument—also removing all diseased portion of the alveolar border by excision. Second, by clearing away all debris by a free use of peroxide of hydrogen. Third, to bathe all of the accessible surfaces of the cementum with carbolic acid and crustic potash, equal parts.

By the scaling and scraping process there is a traumatic condition produced, which, aided by the escharotic effect of the remedy used, closes the mouths of thousands of minute vessels and stops the exudation of vitiated fluid into the pus-pocket, which, as I have stated before, is the real cause of the first symptoms of the disease.

After you have thoroughly cleaned and treated the affected surfaces, you should wait a sufficient time for the recovery of the tissue, which should not be less than three or four weeks. If you persist in the injection of medicines into the wound, you interfere with nature's process of repair.—*Archives*.

The Medical Compend is a monthly of remarkable merit.
H. G. BLAINE, M. D., Toledo, O.

IMPLANTATION.

In New York State Dental Society. Reported by the *International*.

Dr. Jarvie: I have a model in my hand of a case of implantation, which was performed a year ago by Dr. Younger. I spoke of a case that had been performed by him some six months previous, which, a few days after the operation, was as near a failure as could be; yet, by care and keeping the tooth fixed in position, it, up to that time, indicated success. I took an impression of the mouth on Monday, and present the model simply to show its present condition and the perfect formation of the gums around the neck of the tooth. They are just as perfect as any you ever saw. This model was made eighteen months after the tooth was inserted. In taking the impression, the material drew a little over to the right, and it would appear as tho there was a fistulous opening over the root; the process is very thin over that portion, and particularly over the implanted tooth.

Dr. Mirrick: I wish to say to Dr. Jarvie that I saw this operation performed by Dr. Younger about a year ago, and had such a fine appreciation of it that I have always felt an interest in it. The patient called to see me the day before I came up here, and I had an opportunity to examine it under my own light. It is a most successful operation, the most successful that could possibly be made in the implantation of teeth. The gum is perfectly healthy, and it would be impossible for anybody to tell the tooth had not grown there in a natural manner. It struck me, as has been generally accepted by others, that the color, after the tooth had been implanted, conformed to that of the other teeth. I had an opportunity to test this under a good light, and found the color quite different from the others; it has not changed tho'. Even if it had, it would not be noticed under ordinary circumstances. On close examination it is, however, of quite a different color. In the operation of implanting this tooth, Dr. Younger hurriedly selected from among others a tooth that looked as tho' it had come from the gutter. In adjusting it, the end of the root did not fit the socket well and seemed to go through to the soft tissues. The membrane has conformed to that projection and has grown over it; it seemed to me the end of the root is still there.

Dr. Curtis: I have seen teeth that have been implanted nineteen or twenty months. I know them to be firm—absolutely perfect so far as we could expect teeth to be perfect minus the peridental membrane and pulp. They were healthy, and have given no trouble. I have implanted about thirty teeth and have my first failure to report.

Dr. Atkinson: There is a disposition to lay much stress on a single specimen of unsuccessful implantation as indicative of failure. The tooth implanted in Charlie Andrews' mouth remains tight till this

day, with hardly any appreciable loss. I indorse most fully; and am heartily in accord with the statement that it is too early to draw conclusions, but we ought to stop there, and not draw quasi conclusions from a single case.

If there has been any connective tissue formed after the disintegration of the tooth, that settles the question forever. When we can get enough of that kind of action, we will have such a union of implanted teeth as will bring us to a form of tissue demanded in the territory, whether it be connective tissue or bone tissue or secondary dentine, simply by continuing the operation. What is involved in this operation? It is the healthy status of the tooth implanted; it is the power to determine when a tooth is in such a condition as to correspond with the mouth in which it is placed, so that it will be kindly received and made a part and parcel of the family.

I rejoice that we are engaged in this investigation. I am glad of what has been done, and think it will eventually lead us to change our practice. But I wish to say, "Don't go quite so fast." My regret is that there is not enough of our fraternity willing to go into these investigations in common.

You may take the healthiest blood from one individual—that is, healthy for his organization—and introduce it into the veins of another who appears to be equally healthy, and you set up a schism in the family. Whether there is a microbe that is food to the one and poison to the other is a question, but we are on the verge of proving

An injunction was granted by the Allen Circuit Court of Indiana, in favor of the B. T. Goodrich Co., manufacturers of "Akron Dental Rubber," against Josiah O. Keller, trading as the Keller Medicine Co., perpetually restraining him (Keller) from using the trade-mark "Akron" on any of his labels, or boxes inclosing dental rubbers. The above decision was sustained by the Supreme Court of the State of Indiana, February 21st, 1889, and a rehearing of the case denied.

I was told by the agent of a dental dealer that 95 per cent. of the profession cannot, or do not pay for the materials they use at the time of purchase. The barber is the slowest to meet his obligations, while the dentist is next. What a commentary on a profession, that its members cannot pay for their instruments and material, and are classed as poor pay.—*Dr. A. S. Billings.*

During the fifty years of its existence, the Baltimore College of Dental Surgery has been attended by 2,624 students, of whom 1,427 have graduated from that institution.—*Dental Review.*

GOLD VERSUS RUBBER.

DR. J. DIENELT, ALEXANDRIA, VA.

In an article published in the August ITEMS occur these words:

"Here are two pieces of work for comparison, a set mounted on gold, and a vulcanite one; the gold has only been used a year, while the vulcanite was worn eight, and, I think, you will agree with me that the inferior material is the best."

As an assertion like the above will be apt to mislead the younger members of our profession, we beg leave to state our own views and to give our own experience.

We do not hesitate to assert that, in the case cited above, it was not the material but the workmanship on which the blame should have been thrown. A miserable botch the gold set must have been, to have lost its usefulness in a single year.

With justifiable pride we can point to sets on gold plate, made by ourselves over thirty years ago, which are doing good service to-day, and which we know the owners could not be induced to exchange for vulcanite.

Vulcanite has its uses, and on account of its cheapness and the comparative ease with which it is manipulated, it has become popular, thus gradually driving out a class of work which requires ten times more mechanical skill in its construction, to be a success. Yet every dentist who has the best interests of his patients at heart, and whose ambition prompts him to do the best, instead of the cheapest work, should aim to make himself proficient in the construction of metal dentures; for, it is well-known that many times rubber is not admissible where a thin metal plate only can be of use.

In partial sets of teeth, where the lower front teeth nearly strike the upper gum, so thin a plate is necessary, nothing but gold or silver will do.

Some dentists advise the extraction of all the remaining teeth, so an entire set may be inserted; but are we justified in extracting sound teeth in such cases? Is it not rather our mission to preserve than to destroy these invaluable organs?

Many times we have heard ladies remark: "How glad I am you left me these few teeth, with which to bite off my thread while sewing, and with which I can at least make out to eat."

Often, the two bicuspid, or the second bicuspid and the first molar, on one side only, have been lost, while the teeth adjoining the space are sound. In such a case a rubber plate is out of the question.

"Ah! what a beautiful case for a bridge to be fastened into the adjoining teeth by a platina bar!" cries the dentist who is afflicted with the "bridge craze."

All very well; but have we a right to drill into sound teeth for such a purpose? and would it not be better and more honest, to use instead a narrow gold plate with neatly and perfectly fitting clasps, that may be removed at will for cleaning, whenever desired?

WHY DON'T YOU DRESS LIKE A DOCTOR?

I was conversing with a physician some time since, who related the following laughable anecdote:

"You are aware," said he, "that I am not very particular about my dress." Well, a few years ago a rather stylish young man entered my office as a medical student. He had only been with me a few days when a stranger called, and after looking at me a moment, and then at my student, he addressed himself to the latter, saying 'Is this Dr. P.'s office?'"

"Yes, sir," was the reply.

"I want a tooth extracted," said he.

The student glanced at me, when a wink of the eye, and a motion of the hand, gave him to understand that *he* should go ahead and perform the operation. The young man had never seen a tooth extracted, but with some reluctance, and yet, with considerable assurance in his manners, he said, "Take this chair, sir."

The stranger did so, while the young doctor seized a lower molar and commenced a straight forward pull. The stranger groaned, and the student continued his efforts for a few moments, when I said, "Tom, you had better rock that tooth a little, you will get it out easier."

Tom. instantly seized the forceps with both hands, and commenced the rocking process, which resulted in rocking the patient's head backward and forward in a most violent manner. But the tooth did not come, and the stranger seizing the young man's hand, he relinquished his hold.

I then stepped forward and said, "give me those forceps, Tom. I, guess that I can extract that tooth."

"Who in the d——l are you?" said the stranger.

"My name is Parr, sir."

"Why didn't you tell me so when I came in?"

"Because, sir, you turned from me and addressed yourself to my student."

"Well, why then in the name of —— decency and professional dignity, don't you *dress* like a doctor? He looks more like a doctor than you do."

THIRTY-FIVE YEARS IN DENTISTRY.*

BY DR. E. A. FLOYD, PAOLA, KAS.

Many years ago, in filling teeth with gold, many of the dentists used smooth-pointed pluggers, rolling the gold into rope or folding it into ribbon, being careful to take each fold to the bottom of the cavity, so as not to break the strip or rope more than necessary. Now, instead of hand-instruments that are tedious and perplexing, we have our engines for using burs, drills, pluggers, etc., thereby lessening our time of operating and labor at least one-half.

In filling teeth with amalgam, we used to file from a five-franc piece enough silver for our use, and, after taking out the steel particles with a magnet, mix with quicksilver and proceed to fill. Now we have chemically prepared alloys, cements, and all the different forms of gold to suit the desires of every dentist.

Some of us remember well when, to make a set of teeth on gold, we first melted and alloyed our ten or twenty dollar gold pieces, and rolled out our own plate, or (where we had no rollers) beat it out on a blacksmith's anvil; and, after a great amount of care, trouble, and vexation, I must say we turned out some beautiful sets of teeth. Now there are very few persons who want teeth on gold in the old style.

Thirty-five years ago many of the dentists often used the turnkey in extracting teeth. (To persons who are unacquainted with the instrument, I would say that formerly they were called jerkumtwisters, pullikins, etc.) Now, if you should go in a dental office and find one of those "horrid things," it would be kept as a curiosity. Speaking about extracting teeth with the turnkey, I once saw a gentleman who, that same day, had the town blacksmith with his pullers extract a molar, knock out three front teeth, and plow a furrow clear across the roof of his mouth, all at one jerk.

Dentistry of to-day, in most of the States, is protected by law. This generally puts a stop to the quacks calling themselves dentists, who used to go about the country filling teeth with the filings of an old pewter spoon, and cleaning them with a solution of muriatic acid, extracting teeth with the key or two or three pairs of old rusty forceps.

For the young dentist of to-day, if he is a man of energy and ingenuity, there is a bright future. Instead of plodding along as we old-timers did for years, he has all the advantages of almost innumerable inventions and improvements. To illustrate some of the improvements, I will mention that of vulcanizers and the time of vulcanizing rubber. I well recollect the first vulcanizer I had, about the year 1860. It was made of cast iron and weighed about 100 pounds. It

* Read at the Kansas Dental Association, Topeka, Kas., May 2, 1889.

took four hours and a half to vulcanize a set of teeth. This was the instructions of the old American Dental Rubber Company. I might speak of many other old time fixtures; but to the improvement we owe much of our success, such as the latest vulcanizers, the Knapp blow-pipe, the operating-chairs, the dental engines and pluggers, improvements in teeth, material and processes.

In speaking of artistic dentistry of to-day, let me compare the crown set in cement, or in combination with the gold band, to the old pivot tooth set on a hickory peg; also the cleanly and beautiful sets of teeth made on porcelain, and bridge-work on gold or porcelain; and here let me say, a well-made job of bridge-work, placed where the circumstances and surroundings are all favorable, is truly very satisfactory (but, in my judgment, unless such is the case, it will prove a very troublesome luxury).

Speaking about bridge-work, I wish to mention a case which I saw about the year 1859, at Macomb, Illinois. Mr. Harvey Chase, a gentleman about 75 years old, came to my office and wanted me to repair his plate. I examined it and found four lower incisors on a gold bridge or strip of gold fastened by a band of gold surrounding each of the cuspids. The right cuspid was perfectly loose, and had been for years. The whole piece had a thick coating of tartar on it. He told me he had never removed it from his mouth, and had worn it for over twenty-five years; said it was made by a dentist in Boston. I removed it, put on a cuspid, and extended it to a bicuspid.

Now let me tell you what I like to see in a dental office: I like to see books, journals, and plenty of reading matter, for no dentist can keep up with the times unless he keeps himself posted in dental literature. I like to see plenty of snow-white napkins and towels in easy reach; I like to see a dentist wash his hands before he touches a patient's mouth; I like to see a dentist answer all questions asked by an intelligent patient; I like to see a patient feel grateful to a dentist after having work done, and I like to see a dentist do good work, charge a remunerative price, and get the cash.

Some things I don't like to see: A dentist, while standing on the sidewalk, examine a person's mouth and teeth, when he has an office for such business; a dentist filling a tooth with amalgam or cement, and every little while tell the patient to spit out crumbs, when he should be careful to leave no particles in the mouth to spit out; a spittoon left from morning till night with blood in it, when it should be cleansed, if possible, each time teeth are extracted. I do not like to see dentists in the same town cut down the prices of dental work, especially when good work should command higher prices.

What I have seen: A young dentist start in business with but poor

surroundings, and by close attention to business, and strict honesty, become well off. On the other hand, I have seen several dentists commence business with all the comforts and surroundings that wealth could provide, and finally give way to intemperate habits; then fill a drunkard's grave, uncared for and forgotten.

It may not be out of place to suggest a course for a new beginner. To the young man who would be a successful dentist I would say, first find out if you possess mechanical ingenuity, then get a good knowledge of anatomy, physiology, and hygiene, and after graduating from one of our best dental colleges, open an office as soon as possible; make up your mind to be strictly honest; be kind to all, cleanly and thorough in all your operations; do not use tobacco, liquor, or profane language. Now get a thoroughly equipped office,—all the latest and best improvements in instruments and fixtures you can,—and go to work. But don't think because you have a diploma and a nice office that you are a finished dentist. I tell you after years of "ups and downs," you will find you are learning yet.—*Western Dental Journal*.

THOUGHTS ON DENTAL CARIES.

PROF. GEO. WATT.

Written thirty years ago.

Dental caries, as ordinarily used, is a misnomer; yet it is more convenient to retain than to abandon its use. A man who has all his life called himself Smith, will find it inconvenient to do otherwise, even when he has discovered that his real name is Thompson. The term dental caries was in general use, to designate several distinct morbid conditions of the teeth, before we had any accurate knowledge of their nature. And, as the principal phenomena of these conditions are well-known, and are easily observed, there is little likelihood of mistakes occurring in regard to the application of the term. The term caries is usually applied to mortification, or rather, to ulceration of bone; and it was applied to decay of the teeth, under the supposition that it results from inflammatory action. For want of a better term, we still continue it, finding it easier to modify the definition than to change the word.

It is now admitted, by all who are familiar with the subject, that, whatever may be the predisposing causes, the immediate cause of dental caries is chemical action. It is well-known that constitutional causes have much to do with this disease, both in producing badly organized, defective teeth, and in eliminating, or preparing the agents which act chemically on them. But no constitution produces teeth so defective that they undergo spontaneous decomposition, while retain-

ing a vital connection with the general system. I am aware that a few pathologists still maintain that inflammation of the bony texture of the teeth is liable to the same termination as inflammation of ordinary bony tissue; but it is not profitable to debate this point in the present paper. Suffice it to say that the structure and position of the enamel indicate that the danger is from without, not from within.

As soon as it is admitted that decay of the teeth results from chemical action, it is natural to inquire what agent, or agents, produce this action. Accordingly, we find the profession turned at once in this direction. And when the composition of the teeth is taken into the account, we would infer that the deleterious agents are to be looked for among the acids. And here we have had a great confusion of ideas, and are likely still to have it. For example, we are told "that it is proven that nearly all the acids, both mineral and vegetable, act readily upon the teeth." (Harris' Dictionary, Art. "Caries of the Teeth.") Upon any part of the teeth? Or, are we to understand that some of them act on the animal portion, some on the earthy, and some, or all, on the enamel? Just turn to the index of almost any chemical text-book, and ask yourself if it is proven that nearly all of the acids there named act readily upon the teeth. Do carbonic acid, tannic acid, and scores of others that might be named, act *readily* upon the teeth? This expression, and many others, that might be quoted from various writers, show a professional longing for, rather than an attainment of, the truth in regard to this matter.

Now, for convenience, let us assume that dental caries is produced by the action of acids. The question still arises, what acids? Are many acids, or only a few, concerned in its production? One of the laws of combination teaches us that chemical compounds are definite in their nature. Chemical action is always definite. When an acid combines with an alkali, or base, a definite compound, called a salt, is formed. When a different acid unites with this same base, a different salt is formed. Each salt, each chemical compound of any kind, is distinguished from all others by characteristics peculiar to itself. It is unlike all other substances, in some respects. Each chemical result differs from all other chemical results. Of course, then, a great variety of chemical re-agents will produce a great variety of chemical reactions.

Let us now inquire as to the various characteristics of those chemical actions which result in what we recognize as dental caries. Do we hear find a great variety of appearances? Or, is it not well-known that the phenomena of caries are so few, and so circumscribed, that, by common professional consent, but three or four varieties of it are recognized? We find one variety often called "white decay,"

and another that is brownish in color, and a third, that is very properly designated as "black decay." These differ in other respects, as well as in color. In the white variety all the components of the teeth are acted on, and disintegrated, as far as the disease extends. In the second variety, the earthy portion of the tooth seems to be removed, while much, or all, of the animal portion remains, which is conclusive evidence that the chemical agent, whatever it may be, forms soluble compounds with the earthy materials. In the "black decay" there is less disintegration of the tooth substance than in either of the other varieties; and it progresses less rapidly than either of them. The physical characteristics of this variety, aside from the chemical, would indicate that the chemical agent principally concerned in its production forms, mainly, insoluble compounds with the constituents of the tooth. Then there is a fourth variety, commonly called "chemical abrasion," in which the entire tooth substance is *removed*, as far as the disease extends. It is evident that the agent producing this dissolves, or forms, soluble compounds with both the animal and earthy materials of the tooth.

Unless we conclude that chemical compounds are not definite in their nature, and that many re-agents may produce but a few reactions, we are forced to the conclusion that dental caries, as observed and recognized, results from the action of but few substances on the teeth. It is very probable that each *distinct* variety is produced by the action of a single agent, and, invariably, by the same agent. I am well aware that more than one variety may be found in the same mouth at the same time, and in close proximity; and consequently, any given case of caries may partake of the characteristics of more than one variety. It is not uncommon to find "white decay" attacking a tooth in a cavity primarily affected with the brown, or colorless variety. But every practitioner is familiar with unmixed cases, representing all the four classes specified.

The physical characteristics of decay depend much on the texture of the teeth affected; but they are dependent, also, on the nature of the compounds formed by the union of the destroying agent with the constituents of the teeth. The degree of concentration of the chemical agent has also a modifying influence. When much diluted its action is almost solely in obedience to its strongest affinity. For example, if nitric acid were the agent, when concentrated, it would act energetically on the animal, as well as on the earthy materials of the teeth; but when much diluted its action would be almost confined to the latter.

The chemical characteristics of decay, however, depend almost exclusively on the character of the agent producing it. The truth of this appears evident, when we reflect that bad teeth and good ones are

composed of the same chemical substance. Marble and chalk are alike in chemical composition, but not in physical structure; and, tho an acid, acts more rapidly on the latter than on the former, yet the result of the action is the same. An acid, too, will act with more energy on a soft, porous tooth, than on one of firmer texture; yet the chemical results are the same. It is safe to conclude, then, that as there are but few *results* in the chemical actions attendant on dental caries, there are but few chemical agents immediately concerned in their production.

It is not to be inferred from the above that but few agents are capable of injuring the teeth by chemical action. Many acids used in food, or as medicines, are capable of doing injury to the teeth. But no one need suppose that an acid, even tho considerably concentrated, brought occasionally in contact with the teeth, is the immediate cause of caries. Every close observer will conclude that caries is the result of an agent acting slowly and steadily in the accomplishment of its work. He will be apt to infer that this agent is either formed by chemical action within the mouth, or is eliminated therein, either as a secretion or an excretion, and that it quietly performs its disastrous deeds as fast as formed or eliminated. The application to the teeth, of an acid capable of acting chemically on them, facilitates, or predisposes to, the production of caries; and this it may do, without this acid being the *immediate* cause of the decay. A tooth may be fractured, or its enamel may be removed, by mechanical means; and, as the dentine is thus exposed, the tooth is more liable to caries than before the exposure. But no one supposes that the mechanical action which exposes the dentine is the immediate cause of the caries. The dentine would remain sound and healthy, did not some chemical agent attack it. In like manner, in the administration of acids, as food or medicine, the teeth may be so corroded as to expose the dentine, and render it as liable to the action of the carious agent as in the former case; or if the dentine is not exposed, the enamel may be roughened, either mechanically or chemically so as to afford a lodgment for organic matter, which by decomposition, may generate one of the acids immediately concerned in the production of caries. On this principle, acid medicines and acid foods may indirectly, but not immediately, cause caries. The same remarks will apply to acids brought in contact with the teeth by eructation or vomiting.

If this view is correct, the investigation of the subject of dental caries is brought within a narrower compass than many suppose. The first step is to inquire what acids, in health and disease, are liable to be secreted or excreted, so as to be brought regularly in contact with the teeth. The second is to ascertain what acids are liable to be

formed within the mouth, by fermentation, or otherwise. And the third is to discover what ones of all these, are capable of producing the phenomena of dental caries. There is but little room to doubt that, at least, each of the first three varieties is the result of a *specific* agent. And if these unstudied remarks should lead others to investigate this matter we will be satisfied.—*Dental Register*.

A SOCIAL EVIL.

One of the blessings and curses of modern civilization is the piano forte. With the invention of the instrument began a new era in musical entertainment, and since then it has risen into such popularity as to leave its many competitors far in the rear. No house is thot to be completely furnished now-a-days where there is not a piano, and hence it is heard everywhere and at all times. Occasionally its tones are soft and soothing, more often they are rattling and torturing. We have often wondered how it was that an instrument which is considered second in difficulty only to the violin for its complete mastery ever became so popular. Could any one be so malicious as to continually rack the ears of his neighbors with amateur efforts upon a cracked violin or howling cornet, even did these instruments "furnish the parlor so well" as the piano. But we have wondered still more often how it was that girls were so universally obliged to study the piano. The first daughter born into the family is destined from the moment that the sunlight first sparkles in her eyes to be put to the study of music as soon as possible, and often long before she has acquired the slightest knowledge of anything else. Perhaps she exhibits no taste whatever for the art; but then she's a daughter, and along with her younger sisters must continue day after day thumping her patience, amiability and health away trying to learn what fashion has considered *proper* for her to know.

A recent German writer has attributed a large part of the nervousness among young girls to their piano forte practicing, and this is receiving much consideration from the London physicians. Nothing is more absurd than to compel a delicate, nervous girl to practice and practice, oftentimes six and eight hours a day, the same monotonous exercises merely to humor a fashionable whim. There is nothing in its favor when the disposition is vigorously opposed to it; for it certainly does not develop grace, either of body or movement, nor does it bespeak especial culture more than any other more congenial art would.

The long hours of practice indulged in by those who are fond of it are not only dangerous, but frequently unnecessary. The habit is one that grows, and the emotional nature is so stimulated that the performer is restless unless she is practicing. We know admirable pianists

who could entertain cultured non-professional audiences that have never practiced more than a couple of hours a day. Regularity of time well distributed does more than length of hours.

As we have also said, the emotional nature becomes overstimulated, and thus the equilibrium necessary to the preservation of the nervous health is destroyed, and all sorts of nervous ailments ensue. This is readily confirmed by the lives of most of the great composers and pianists of the world.

It is time then that physicians should take this question into consideration and educate people out of the silly notion that every girl must be a pianist. Away with the absurd fashion, and many of our girls will be more healthful, will enjoy life with a keener zest, and many of the common ailments now arising from an overwrought nervous system will disappear.—*Times and Register*.

"A CANCER" EASILY CURED.

Mrs. C., aged about fifty, has been wearing a full set of teeth on rubber plate about twenty years. They were worn all this time till within the last two and a half years; during this time there has been considerable soreness at the posterior border of the upper plate; this was relieved by cutting away the border of the plate about two lines and rounding it off at the upper edge. There was also a little irritation of the mucous membrane at the buccal border of the same plate which was also relieved by dressing. The irritation at both these points was undoubtedly due to the settling, though very slow, of the alveolar ridge.

A greater and apparently more serious difficulty was found on the tongue on the left side and about opposite the first and second molars on the lower denture. This consisted of an ulcer of about a third of an inch in diameter, and a line in depth. Round about this there was considerable induration. It had been in this condition for more than two years, and all this time undergoing treatment by a physician, or physicians rather, for several had treated it. The statement was made that it was probably malignant and would necessitate the removal of a part, if not all of the tongue. The patient had been for a considerable time in great trouble about it and was much depressed.

She was questioned, as to whether the tongue was ever caught between the teeth, to which she replied that she was not aware that there was any thing of the kind. Upon examination it was found that the molars of both the upper and lower dentures of the left side had been ground quite smooth on the masticating surfaces and very squarely, so that the inner edges came very accurately together, quite to the lingual surfaces of these teeth, and it was found that the tongue was, in masticating, constantly though imperceptibly, caught in this close-fitting

bite; thus inducing and continuing the ulcer on the tongue. The angles of these were now rounded off and dressed so that the tongue was not caught. Immediate improvement of the affected part resulted, and in a short time was entirely well.

Two points are brought to notice by this case: the first is that care should be taken by dentists in the construction of artificial dentures, whether full or partial sets, to avoid all points of irritation to the soft parts either by roughness of any part, or by unequal pressure, especially at the edges of the plates, or as in the case above described, by biting and bruising the soft parts in the occlusion of the teeth; and secondly more care should be exercised by both dentists and physicians, and especially the latter, in respect to mouth affections, and especially those connected with the teeth, as to diagnosis and prognosis. This case was treated by a physician for about two years under the impression that it was rapidly tending to malignancy, and he was of the opinion that it had already attained that condition, and that nothing short of the removal of a part, if not the whole of the tongue would prevent a fatal result. Two or three physicians had the same opinion. Two dentists examined it, and were quite befogged as to the cause or nature of the affection. Had there been in this case a favorable condition for the development of cancer or malignant tumors, such disease might have taken place, but that it had not yet assumed that form was manifest by the results; and still further, the more obvious indications of malignancy were not present.

It is well that due caution be always exercised in the examination and pronouncing on affections arising from diseased teeth, for they are often very obscure, treacherous, and persistent. Error has been too often committed in prematurely announcing malignancy, but on the other hand of denying its presence when strong evidence was present to that effect. Malignant diseases should be studied and better understood by all who in a medical or surgical aspect may have anything to do with them.—*Dental Register*.

A Woman Dentist is somewhat of an innovation, but that she is likely to make her mark in the profession is indicated by the high standing of the young woman who has just been graduated from the Boston Dental College. According to the announcement of the Dean, she stood No. 1 in a class of between thirty and forty, and in the race she has run she was so far ahead of her classmates that she could hardly hear the tread of the fellow next behind her. The dentist's chair is not exactly a synonym for everything that is comfortable and inviting, but the presence of a gentle woman operator promises to detract something from its terrors.—*Boston Herald*.

HOW TO SUCCEED IN OUR PROFESSION.

The first great element to success is a thorough education, to be sufficiently informed in leading sciences; but especially to be thoroughly posted on all branches of our profession, are marked requisites. One who accepts the responsibilities of a profession without such qualifications is unworthy the exalted relationship he seeks. The effort to lay first a broad basis for a professional superstructure may cost self-denial, self-sacrifice, toil and struggles; but the goodness of learning rightly rewards all who pay their devotions at her altars.

Professional prominence and business success are becoming every year more dependent upon a thorough collegiate education. If we consider our life-work in a mere business, financial sense, statistics show that educated mind has greatly the advantage, and that the time and money spent in colleges are both a saving of time and investment richly productive. Business men now bear testimony to the fact that education is of great service to merchants, publishers, mechanics, agriculturists, etc. In the profession there is every need for cultured mind. Only such rise to anything like commanding usefulness. Education is much more general now among the people, and they will demand more of all who strive to lead or instruct them. We are told that all professions and vocations are crowded; but there never was such a demand and such opportunities for thoroughly trained intellect and ripe scholarship. Hence many doors of usefulness and of pre-eminence open to every one giving any evidence of superior qualifications. Our profession is peer to any in offering facilities for acquiring a thorough knowledge of all her branches. A number of colleges are established here and there, presided over by the brightest lights, where all who aspire can go and be thoroughly cultured and skillfully trained. We have many journals, edited and contributed to by men of ability, and through them much valuable information can be gleaned.—*Dental Luminary*.

Antipyrin as a Local Styptic.—A French Physician relates a case in which a boy of 14 suffered from persistent bleeding after the extraction of a molar tooth. Perchloride of iron was without effect, and so much blood was lost that syncope was induced. On recovery, the hemorrhage again broke out and perchloride of iron was once more tried, but vainly. The cavity was then plugged with two or three pledges of lint steeped in solution of antipyrin. The bleeding at once permanently ceased. It was noticed that while the perchloride caused severe pain, the antipyrin was not objected to. It is suggested, not improbably, that the antipyretic action of this and similar drugs may possibly be due to the fact that they diminish the blood-supply by their astringent effect on the blood-vessels.—*Br. Jour. of Den. Science*.

MODE OF TAKING AN ARTICULATING IMPRESSION.

Sr. Spence says: In taking articulating impressions, desirable results may be obtained by the use of two sheets of mica ("isinglass") placed together in the lump of warm wax to be used for taking the "bite." Each sheet is laid on a flat surface, and warm wax prest on it, and then brought together, the overlapping edges of wax being prest together, so as to hold the two pieces as one until the whole is in the mouth. But, first, a slip of wood is pushed into the wax from the front, and just a little aside from the median line, the sheets of mica having had V-shaped spaces cut in them, to permit the stick to penetrate the wax sufficiently to act as a handle, and at the same time to prevent the jaws from closing any more than is desirable. In many cases the width of the bite may be determined by the size of this stick, previously whittled to the width desired. The mass is now placed in the mouth, and the first closure made. The operator will then insert his finger, and, in pressing the wax down against the teeth, also sever the slight connection of the edges of the wax, and then the mouth may open and shut freely, indicating by repeated closures what is the correct relative position of the jaws during occlusion. But should the divided halves not separate freely, a thin spatula may be run between them. Before withdrawing the bite from the mouth, the halves may be fastened together by running a hot instrument into the space left in the wax by the stick of wood. If an excess of wax is used, so as to necessitate the cutting away of some of it to allow the lip to fall into its proper position, one or both halves may be easily removed from the mouth and replaced.

IONE, CAL., August 13th, 1889.

EDITOR ITEMS:—In answer to information asked by Henry S. Dill regarding bleeding gums.

First.—Mix together pure wood creosote and crystallized iodine.

Second.—Fill a wide-mouth bottle with tannic acid, then add sufficient glycerin and dilute.

Third.—Phenol sodique.

Treatment.—Dry the gums thoroughly, and apply the first to the face margin of the gums thoroughly. Dry again with spunk or cotton, and apply the second in the same manner; then rinse the mouth with the third. Use the first and second treatment once in two days. The third diluted one-half with water, and use as a mouth-wash three times a day all through the treatment. You will find an improvement after the first day. Advocate the use of a rather stiff tooth-brush.

DR. O. T. WILSON,

Ione, Cal.

ONE YEAR BETTER.

[From Archives.]

Dr. S. H. Harlan, in the ITEMS OF INTEREST, gives the Spring of 1879 as the time he devised and fashioned a gold crown, which he is now wearing, and which he believed to be the only one then in use.

After reading the article and sharing his mortification at the thought of paying tribute to a monopoly, I went to my books and found that on March 9th, 1878, I put on, to a lower left second bicuspid, a gold band crown, similar to many now made, for a lady now residing in Chicago, and am sure this was the first one I had ever seen made or worn up to that time.

While in Chicago during the society's anniversary days, last March, I saw this crown and found it as perfect, so far as usefulness and appearance goes, as any crown I now have doing service. "Stolen thunder!" I should presume there are many trying to console themselves with some charitable "reflection," such as took possession of Dr. H.

EDGAR PALMER.

A Shrewd Patient.—Every community has its quacks, who pretend to cure the incurable, and to do everything else short of raising the dead. The *Whitehall Review* relates the story of such a man, a bone-setter of the north of Scotland:

A country lad had his leg injured at the factory, and was treated for some time by the local doctor without much favorable result. His mother had great faith in the bone-setter, and wanted her son to go to him, but the boy objected, preferring, as he said, the "reg'lar faculty."

Finally, however, he yielded to his mother's persuasions, and was taken to the town where the famous bone-setter resided.

The leg was duly examined, and it was found necessary to pull it very severely, in order "to get the bone in," as the quack expressed it. The patient howled in agony, but at last the bone was "got in," and he was bidden to go home. In a few days he would be all right and could resume work.

"Didn't he do it well?" said the joyous old lady, as they started homeward.

"Yes, he did, mother," said the lad. "He pulled it well; but I was na sic a fool as to gie him the sair leg!"

Newspaper Ambition.—Great progress is being made in dentistry for animals. Barnum's hippopotamus lately sat and had a bad tooth extracted without a growl, and the same operation is now practiced on lions and tigers. When the wild beasts are all provided with false teeth we propose to interview a few of them in their cages.—*Boston Globe*.

The Annual Meeting of the Colorado State Dental Association was held in Denver, June 26th to 28th.

The following essays were read :

Surgical Treatment of Abscess—J. M. Porter, D. D. S., Denver.
Cocaine Applied to Dentistry—Geo. J. Hartung, D. D. S., Denver.
Alveolar Abscess without Fistula—W. A. Smith, D. D. S., Salida.
Microbes—P. T. Smith, D. D. S., Denver.
Preparation of Comp. Cavities—H. A. Fynn, D. D. S., Central.
Exposed Pulp—J. N. Chipley, D. D. S., Pueblo.
Dietetics—Wm. Smedley, D. D. S., Denver.

The subjects treated brought out many interesting and valuable thoughts, while the discussion that followed gave evidence that the members came prepared to take active part.

Clinics were given by :

Dr. S. Davis, Denver—Fusing Bands to Crowns.
Dr. M. A. Bartleson, Denver—Bridge Work.
Dr. J. W. Grannis, Colorado Springs—Gold Filling.
Dr. W. E. Griswold, Denver—Anchoring Bridge Work.

Dr. F. A. Twitchell exhibited his new oxyhydrogen blow-pipe, using gasoline and nitrous oxide, producing a very intense heat, and particularly useful to those dentists not having gas in their laboratories.

The Denver Electric Motor Company displayed a device connecting the dental engine hand-piece and arm with the Wooley Electric Motor, enabling the operator to control the speed, reverse the direction of the bur, or stop it at will.

The officers elected are :

President—Dr. J. M. Porter, Denver.
First Vice-President—Dr. M. H. Smith, Colorado Springs.
Second Vice-President—G. W. Milton, Silverton.
Secretary and Treasurer—H. P. Kelley, Denver.
Corresponding Secretary—Chas. F. Dodge, Leadville.

Dr. P. T. Smith was elected a delegate to the American Dental Association.

Thirty-nine new members were enrolled.

As it was mainly through its efforts that the new State Dental Law was enacted, this Association may justly feel proud of the result.

On the evening of the 28th the Denver members of the Association tendered the visitors a banquet at the St. James, Dr. S. Davis acting as toast-master. Our profession and its interests were handled in a creditable manner by Drs. Smith, Porter, Norman, Hartung, Smith, of Salida, Chipley, Bartleson, and others.

Leadville, Colo.

CHAS. F. DODGE,
Corresponding Secretary.

For Our Patients.

FEEES.

A Dentist in his office sat,
 Deep in thot, on a subject that
 For several days had engaged his mind,
 Cleft palate, or something of that kind;
 When Smith into his sanctum walked—
 "Good morning," he said, and then he talked
 On teeth, gold fillings, the toothache too,
 And "lots of work for the dentists to do;"
 Recumbent then, in the Doctor's chair
 He throws himself back, with a solemn air;
 Opened his mouth, which plainly told
 There were *proximals* there to be filled with gold—
 Cavities such as dentists dread;
 For the water welled up from the fountain head,
 And the patient was nervous as he could be,
 And squirmed, and twitched, to any degree;
 "Mine's a difficult case," remarked the gent,
 The dentist quietly bowed assent.
 The rubber dam was fixt at last,
 All danger of inundation passed,
 And zealously then the Doctor plied
 His skilful art, (tho his patience was tried),
 Then when all were finished he fondly took
 His last, long, scrutinizing look
 At the beautiful fillings he had made.
 "There! finished. Well done," he proudly said.
 Smith looked in the glass as he sat in his seat,
 And praised each filling, so bright and neat;
 His thanks and his smiles together were blended,
 Delighted to know all his troubles were ended.
 "I am very much pleased; now, Doctor, pray,
 What's the amount I have to pay?"
 "Well, forty dollars, sir," (said he),
 Half whispering; the well-earned fee
 Was handed the Doctor with a bow;
 And he said, "Well, Doctor, really now,
 You'll not get angry if I say
 You've earned that in an easy way."
 "What!" (said the Dentist), doubting whether
 He understood him, altogether.
 "Why, what I mean, is simply this,
 Your fee is not at all amiss,
 But still, if I my mind may tell,
 For three hours' work you're paid right well."
 "Three hours! ye Gods!" the Dentist cried,
 "Three hours! aye sir, and what beside?"

It took me years of toil and toot
 To earn the skill so dearly bought;
 All this you seem to count as nought.
 Those teeth of yours my witness stand
 The test of toil-worn head and hand.
 In my opinion they appear,
 The time-wrought work of many a year.
 It takes from youth to manhood's prime
 To learn the art such work to do, sir,
 This is *my* estimate of time,
 But "ignorance is bliss" with you, sir."

—JANE H. NEWINGTON.

ALL ABOUT AN ACHING TOOTH.

From the *Practical Dentist*.

An Irishman, with his face bundled up, called on a dentist to have an aching tooth extracted, said he:

"Docthur d'ye moind that?" pointing to a lower molar, "Fur three blissid days an' noits, be me sowl, its bin howlden a wake in me mouth, an' its meeself as wants to howld a wake over its remains if y'as kin git it riddy for a funeral."

"I think," said the doctor, "I can promise you a little practical assistance."

"Thin be the howly Moses you're a darlint!" exclaimed Pat while seating himself, "but I say me boy, jist be afther saen that its fut nor legs iz'nt hid away win y'as git throo wid the exekooshun fur its agin me konshuns to howld a wake over a muterlated karpse."

"I'll attend to that," said the dentist while adjusting his instrument to the doomed tooth.

A strong pull and a loud howl followed this operation quickly, indicating that the preliminary exercises to the proposed funeral were in progress, and soon thereafter the "karpse" was "laid out."

"There now," said the dentist holding up the deposed molar, "is your victim, body, legs and feet, intact; you, therefore, can proceed with the funeral as soon as you please." Noticing some stray tears rolling down Pat's cheek, he added:

"But what are you crying for, my man?"

"Its a little practercen I am, in the morn'n line, y'as reverence," said Pat. "Shure y'as would'nt hav' a mon go to a funeral widout a bit of a teer stuck away in the corner of his eye, would y'as?"

A young lady who had suffered a long time with an aching tooth was told by her father that if she would have it extracted he would make her a present of a set of diamond ear-rings—jewels she had been begging him to get for her, for nearly three years.

"Its a bargain?" she exclaimed, in momentary ecstasy of spirits.

On the day following, the father purchased the gems and took them home. "Here," said he, handing them to his daughter, "is what I promised you. Now get ready to accompany me to our dentist and fulfil your part of the contract."

"But the tooth don't ache now, papa," said the young lady, her eyes sparkling with pleasure at the treasure she held in her hand. "Surely papa, you will not insist on an immediate fulfilment of my promise under the circumstances."

The pain in her tooth having subsided, and the old gentleman not wishing to interrupt the joy she was experiencing, yielded to her wishes and returned to his business. Soon mother and daughter were examining the jewels critically and guessing as to their actual value. Finally, tiring of this amusement, the handsomely wrought box, with its valuable contents, was carefully put away, when the daughter said:

"Mama, do you remember papa promised you?—let me think—why, its two years ago, that if you would give up your trip to Saratoga and remain home all Summer, he would make you a present of an elegant seal-skin sack and a splendid horse and basket phaeton?"

"Oh yes, my dear, I remember that promise only too well."

"When you asked papa to fulfil his promise, what did he say?"

"That it was made without any reference to time, and, therefore, he had a right to consult his convenience as to when the gifts should be made."

"Well, mama, there are two promises made in this household without reference to time, one from papa to you, and one from myself to papa, that will sail along together on the same uncertain waters."

The Western Illinois Dental Society will meet at Bushnell, Tuesday and Wednesday, October 22d and 23d. An interesting program has been prepared, and a large attendance is expected. A. H. McCandless, Secretary, Rock Island, Ill.

The African News is a monthly magazine of forty-eight pages, devoted to news from Africa, with an account of fifty missions under Bishop Taylor of the Methodist Episcopal Church; also a copious correspondence from the Bishop himself, including a biography of his life. Bishop William Taylor, editor, resident in Africa; Dr. T. B. Welch, Vineland, N. J., associate editor. Price, \$1.00 per year. Drs. T. B. Welch & Son, Vineland, N. J., publishers.

The use of tobacco has been forbidden in the Santee Indian Normal Training School. This step has been made possible by a growing sentiment against the weed on the part of the Dakotas.

Editorial.

THE USE AND ABUSE OF IMAGINATION.

Do we sufficiently esteem and cultivate the faculty of imagination? The question is not—Are we sufficiently imaginative? Most of us are apt to allow our minds to wander into the flittering frivolities of nonsense, and into the hurtful hot-houses of unrestrained passions, till our thoughts become airy novels, quite outside of the realm of the actual, the useful and the healthful.

But with proper discretion, it is pleasant, and sometimes profitable, to allow ourselves to be led into this region of luxurious growths. We thus come into possession of flowers and delicacies and beautiful trees of luscious fruits. In fact, whether we will it or not, most of us live here half our time, and find here life's richest gifts, inventions, and the means for our greatest progress and happiness, as well as that which is false, mischievous and misleading.

We would not have the mind and heart deprived of this wonderful faculty, but we would have it controlled by reason, good judgment, and a pure spirit; for if we are not intelligent and clean in our imagination, we shall be slaves to its vagaries and vices. It must not be abandoned to its own unrestrained will; or rather it must be directed and controlled by a strong will, a cultured intellect and refined passions, and be led into fields chosen with great discretion. If left to run wild, it brings forth useless, pernicious, and, perhaps, poisonous growths.

No one has too much poetry, and all that gives life its delicate hues. No one has too much hope and faith, and warm, confiding aspiration for the beautiful, the esthetic, and all that gives refinement and spirituality. Most men live too much in the dirt, digging for what they call wealth, till the back is bowed, the eyes are dimmed, and the spiritual nature is blunted. Such people cannot stand sufficiently erect to take in the beautiful in nature. They see no gorgeous skies to inspire them; they hear no whispering zephyrs to enchant them; they feel no cupid's dart to disturb them; groveling, stolid, sordid, their only thoughts, and feelings, and interests are of the earth earthy; no birds sing to them; no storms nor glaring lightnings, nor rolling thunders, speak to them. They have no time for the rapturous pleasures of the imagination; for the sumptuous rest of its diversions, or for anything that does not give them material gain by the sweat of their brow. These people in the tread-mill care nothing of these things; think nothing of them; know nothing of them. And these are not our best citizens, nor our shrewd inventors, nor our leaders in the world's great improvements.

It requires an imagination well-developed by intelligence, well balanced by reason, to show us the bright side of life, its grand possibilities and its golden opportunities. It is imagery of the superhuman that lays hold on the riches of the unseen; it is its sharp ears that hears the voices that wonderfully inspire our genius; it is its fine susceptibilities that awaken us to our greatest enthusiasms and powers and enrapturing glories, bringing a new life to the most despondent, a new strength to the most enervated, and a new heaven to the most forsaken. Then the very tread-mill becomes a pleasant task, a prison, a palace, and our friends angels.

HOW TO SUCCEED.

This little article is intended for the lazy, loose-jointed, unsuccessful dentist; others may skip it.

My friend, you may have success, if you will; but the elements of success must be within you. Charge failure on no one but yourself; for if you succeed it must be by your own exertion, and with these well applied, no one can prevent your succeeding, others cannot hinder you, if you do not hinder yourself. Even opposition should only rally you to greater exertion, and every difficulty make you more skilful and pertainacious; and remember, no one can make you a success, unless you make yourself its chief factor.

The elements of success are few and simple. The main thing is to go to work with brain and muscle, systematically, continuously, intelligently. Do everything thoroughly; and, that you may do it acceptably, be studious as well as laborious. Out on such shiftlessness, thoughtlessness and laziness as many dentists display! Such people ought to fail. Have a system and work up to it. Let everything be done by a fixed plan, and the day's work by definite arrangement and time, as far as the nature of your business will allow; keep an accurate account of income and expenses; make each day's work a lesson for the morrow; and be determined to excel in everything pertaining to your business. You will soon see the tide turning in your favor; but if it does not, it is only because you do not deserve it; let patience have her perfect work, and by and by, you shall have your reward.

It is astonishing to see how much more can be accomplished by intelligent order in the doing, and how much more can be saved by rigid economy, than by a loose expenditure of time and money. Money comes freely into the pockets of some dentists, and yet there is never five dollars at hand when most needed. Bills are presented, but answered with apologies; materials are wanted, rent due, the larder empty, clothing threadbare, benevolences neglected, office shabby,—not because it is necessary to be thus behind hand, but because shiftless-

ness and laziness hinders success. Much of the money received is foolishly spent, and much more that might be received goes into the pockets of your competitor, because you are unworthy of it.

If you would build up a good practice, deserve it by an intelligent application to it, by thoroughness to increase knowledge and skill, and by a suavity and inviting surroundings that shall attract the better class.

MUST PHYSICIANS AND DENTISTS BE LICENSED?

In Concord, New Hampshire, yesterday, in the cases of a physician and a dentist, indicted for practicing medicine and dentistry without a license, the Supreme Court quashed the indictments, and declared the law requiring a license for the practice of medicine and dentistry unconstitutional.—*Local paper.*

Of course, this decision is binding in New Hampshire only, tho it is a precedent in other States, and is so far a significant pointer against the legality of a license in all the States.

This should stimulate both professions more than ever to educate the people as a safeguard against charlatans, whether with or without degrees or license. And let us all remember that even degrees are no defense against malpractice; it is just as severely punishable with as without them.

Phenol Camphor.—Phenol camphor is prepared by dissolving three parts of camphor in one part of carbolic acid. This produces a rather thin, clear, yellowish liquid, with a strongly camphoraceous taste and smell, which mixes readily with fatty, alcoholic, and ethereal liquids, and easily dissolves cocaine, salicylic acid, iodoform, and other bodies. Phenol camphor prevents suppuration; it combines the cooling effects of camphor with the antiseptic properties of carbolic acid, and, unlike the latter, is painless in its action, and does not show acid properties. It is a preparation which commends itself in dentistry on account of its powerful germicidal and deodorizing properties.

There are dentists who write M.D., D.D.S. after their name that should hear the German farmer's comparison, "Oh, dot vas noding; I had vonce a calf vot sucked two cows and he made noting but a common schteer after all."

Ninety-one dentists, graduates from the Pennsylvania College of Dental Surgery this year, four were women, and it is said these four young ladies outstript most of the boys in the race for honors.

The University of Denver has now a Dental Department. The interesting program of its second commencement is before us. Thus our Great West grows. What a mighty nation we soon shall be! And the various departments of education will keep abreast of all other growths.

DR. JAMES TRUMAN.

Dean of the Dental Department of the University of Pennsylvania.

Dr. James Truman is 63 years of age, we would say 63 years old, but the Doctor is so young, strong and active in his threefold sphere of Dean, Professor and Practitioner, it would not be appropriate to call him old. He was old at 21,—for his age,—if history is true, for he was quite beyond his years in everything pertaining to the dental profession, which, in his father's employ, he had already made his vocation, with hardly an avocation to relieve him from what to some would have been called a drudgery. Ah, these are the kind of boys we hear from, in after life. Yet, to look at the Professor now at 63 one will not accuse him of having made his life a tread-mill. It is not hard work that hurts us, or clouds the spirits, or makes us old, if only we can make hard work, hard study and hard knocks our enjoyment, as the Doctor has. As with him, they give us brawn of brain and muscle. It is the idle, and the dissipating, and the soft-gloved dude that melts away, before the stern realities of life.

James Truman entered his father's dental office at the age of 10 years, as assistant in the laboratory, which in those days required considerable skill, especially in making and baking teeth. With intervening terms at school, he continued with his father till, at the age of 28, he attended the Philadelphia College of Dental Surgery, which was then, as now, a thorough school. Here he had the enviable association, as teachers, of Professors Townsend and Arthur. In 1862 we find Dr. Truman Demonstrator in this college.

In 1863 he began his public literary course by writing to the Dental Times an elaborated article on "*Supernumerary Teeth.*" This was so good it was copied into English Journals; and it was so well received, it encouraged him to write as well as to teach. He has been ever since a popular writer, always showing thorough study, great deliberation, and a happy choice of subjects.

For several years he was chief editor of the *Dental News*, where he held a strong pen, and showed much wisdom in the choice of contributions and selections.

Dr. Truman is now Professor of Operative Dentistry and Dental Histology in the University of Pennsylvania, and Dean of the Dental Department.

He is also President of the National Association of Dental Faculties of the United States, and President of the Odontological Society of Pennsylvania. We give you his portrait as our frontispiece.

Dr. Truman's noble course in advocating the admittance of women to the profession is so commendable we will give it a separate chapter.

THE DENTAL PROTECTIVE ASSOCIATION.

Dr. J. N. Crouse and his associations are worthy of the moral and financial support of the whole Dental Profession. It is their effort to protect individual dentists from unscrupulous parties who would bleed them, because, not protected by any strong intelligent association willing and able to dispute their assumed rights.

To meet this need *The Dental Protective Association*, enters the field and calls on dentists to join them by each paying the fee of ten dollars, as a guarantee that every member shall be protected in his rights to the full extent of the law. This is certainly a cheap protection, and has every feature of being a thorough safeguard against imposition. Let it, however, be remembered, they do not guarantee such protection, unless the dentist joins the association, by the payment of his fee, before suit is commenced against him.

Perhaps there could not be a better evidence of the efficiency of this *Dental Protective Association* than the fact that the International Tooth Crown Company has sued Dr. Crouse in the sum of *sixty thousand dollars*, for the damage the company says he has done it, in practically breaking up its business of selling its dental patents to dentists, and of interfering with its relations with dentists who have already bought rights, and have been paying yearly royalties.

The New York State Dental Association, unanimously passed the following resolutions, covering it with a thousand dollars from the treasury as an earnest of their good faith, and besides this, a subscription list was immediately started and liberally patronized, to be farther circulated by members on their return home for the same purpose.

In view of the injustice which the profession has sustained in the past, as well as the annoyances to which it may be subjected in the future, and fully appreciating the arduous and important labors of Dr. J. N. Crouse, of Chicago, be it

Resolved, That Dr. Crouse is entitled to the earnest, and practical support of every dentist in the United States, and further be it

Resolved, That the American Dental Association fully approve of the formation, the plans and methods of the Dental Protective Association of the United States, and pledge to it our united and continued support and moral aid.

Yes; that is certainly one on us. We had been writing on this same subject *Definite Thought*, and we were so full of the subject that when the article of my friend Prof. Watt came from the printer, it looked so much like us, we put it by mistake as ours into our editorial department. We beg pardon.

DENTAL DEPARTMENT OF THE UNIVERSITY OF PENNSYLVANIA.

This department was organized by the Board of Trustees and went into operation in the spring of 1878. The faculty as originally composed, consisted of Professors Joseph Leidy, Theodore S. Wormley, Horatio C. Wood, James Tyson, Edwin T. Darby and Charles J. Essig.

The two chairs of "Mechanical Dentistry and Metallurgy" and "Operative Dentistry and Dental Histology" were filled respectively by Charles J. Essig, M. D., D. D. S., and Edwin T. Darby, M. D., D. D. S.; both of these gentlemen were connected with the Pennsylvania College of Dental Surgery, filling similar chairs in that institution. In 1882 the chair of "Dental Pathology, Therapeutics and Materia Medica" was added, and James Truman, D. D. S., elected to the position. Since then, large additions have been made to the working force, and subjects of special and practical importance added to the curriculum.

The faculty of this department have, from the beginning, recognized the necessity of a higher standard of dental education, and at the beginning refused to adopt the objectionable method, then prevailing, of graduating men on what was termed "five years' practice," and insisted on two full winter sessions. This has since been adopted by all the Dental Colleges of the United States.

The feeling that influenced the original faculty, is clearly set forth in a circular issued by Prof. Tyson, as secretary of the faculty of medicine, August 30th, 1878, a quotation from which is: "The University of Pennsylvania now purposes to establish a course, the first session of which is identical for medical and dental students, so far as Anatomy, Chemistry, Physiology and Materia Medica are concerned. As a part of this course, is included Laboratory instruction in Chemistry, three hours per week, in which the student personally practices the required manipulations under the direction of demonstrators, precisely as he does his practical work in mechanical and operative dentistry.

"In addition to this, the dental student has the regular instruction from the chairs of operative and mechanical dentistry. * * * For the present the dental student is excused from the practical work in the histological laboratory, (use of the microscope) two hours per week. [This has since been added under the care of Prof. Peirsol] and work in the pharmaceutical laboratory. * * * A comparison, however, of these studies, with those of the ordinary American medical or dental curricula, will show that the dental student at the University pursues, in his first year, a course wider and more thorough, than the medical student, of all but one or two medical colleges in the United States."

Since this was written the course has been increased from five months to seven, in the regular or winter term. The practical work

is, however, continued throughout the year, with the exception of the month of August.

The success of this department has amply justified the expectations of its founders, and it has also demonstrated the possibility of maintaining a third dental school in Philadelphia.

This was regarded as impossible by many, but the result has shown that this city is a centre of dental education, as it has been for medical training for a long period.

THE ADVANCE IN THE PRICE OF ARTIFICIAL TEETH.

One of the most embarrassing things a manufacturer can do is to advance prices: no one will complain if he lowers them. But where the price so largely depends on the cost of material, as that of artificial teeth on the cost of platina, the manufacturer must be governed by the commercial value of that precious metal, unless his price for teeth is already enough to meet this exigency.

Two facts, therefore, should satisfy purchasers in the slight advance made, where the previous margin of profit has been close :

1st. Platina has permanently advanced in price. For a time quotations fluctuated, and tho, on the whole, it showed a material advance, it was hoped it would by and by settle somewhere near the old price, especially, as new deposits were said to have been discovered. But these "finds" have proved delusive, and the use of platina in the arts has so increased, notably in electrical apparatus, that its cost has advanced above all precedent, and undoubtedly advanced to stay.

2nd. The price of, for instance, the Wilmington teeth, has not been kept below that of some others because of any inferiority, but so as to give the dental profession a first-class tooth as cheaply as they could possibly be made, and have a reasonable profit. In weight of platina pins, in fineness and purity of body, in the character of molds, and in every quality of finish, *The Wilmington Manufacturing Company* put them on the market as the peer of any teeth in the wide world; and yet the advance in price is below the increased cost of platina, and is not in proportion to the intrinsic improvements made in them during the last few years.

We believe the Wilmington Company will find it has gained the confidence of the profession, and will gain in sales, by thus dividing with dentists the loss sustained by the advance of platina; for their price must be satisfactory to those now using them, and it will induce many others to investigate their good qualities, which will be sure to result in their increased use. Their strong body, their close resemblance to the natural teeth, their great variety in shape, size and shades, and their easy manipulation in conforming them to the model and to the natural contour of the mouth, are some of the commendations that make them such favorites.

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THE MISSOURI STATE DENTAL ASSOCIATION.

The Twenty-fifth annual meeting of this association was held at Pertle Springs, Warrensburg, Mo., July 9, 10, 11, and 12, 1889, and the following officers were elected for the ensuing year:

President, Dr. Henry Fisher, St. Louis; First Vice-Pres't, Dr. J. D. Patterson, Kansas City; Second Vice-Pres't, Dr. J. P. Gray, Sedalia; Rec. Sec'y, Dr. John G. Harper, St. Louis; Cor. Sec'y, Dr. William Conrad, St. Louis; Treasurer, Dr. James A. Price, Weston.

Executive Committee.—Dr. J. F. McWilliams, Mexico; Dr. W. L. Reed, Mexico; Dr. W. H. Buckly, Liberty.

Board of Censors.—Dr. L. M. Nicholson, Fayette; Dr. J. W. Whipple, St. Louis; Dr. J. G. Hollingsworth, Platte City.

Committee on Ethics.—Dr. N. H. Gaines, Independence; Dr. I. D. Pierce, Kansas City; Dr. C. V. Huff, Knob Nostor.

Publication Committee.—Dr. H. S. Lowry, Kansas City; Dr. W. E. Tucker, Butler; Dr. E. W. Stevens, Cameron.

Law.—Dr. J. A. Price, Weston.

Supervision of Clinics.—Dr. D. J. McMillen, Kansas City.

The next annual will be held at Pertle Springs, Warrensburg, Mo., the first Tuesday after July 4th, 1890.

321 N. Grand Ave.

St. Louis, Mo.

WM. CONRAD,

Cor. Sec'y.

Hayden Dental Society of Chicago.—The Hayden Dental Society was organized and incorporated under the laws of the State of Illinois, August 3d, 1889.

The object of the society is the professional and social improvement of its members. Meetings will be held in Chicago on the third Monday of each month (except July and August). The following officers were elected for the ensuing year: *President*, Louis Ottofy; *Vice-President*, A. H. Freeman; *Secretary*, A. J. Oakey; *Board of Directors*, J. H. Rogers, J. L. Ubellar, H. P. Smith.

A. J. OAKEY, *Secretary*.

The Semi-Annual Meeting of the Southern Minnesota Dental Society will be held October 15th and 16th in Lumbrota. An interesting program is expected, and the profession is cordially invited.

Subscription for next year. By receiving the names of subscribers before the end of this year, we are able to make out our mailing list for the coming year much more satisfactorily. Those now taking the *Items*, therefore, will confer a special favor by sending in their renewals early.

New Subscribers, sending in their money *now*, will receive the November and December numbers free.

Miscellaneous

THE TOBACCO BUSINESS.

The House of the Michigan Legislature passed last week the Jackson cigarette bill which prohibits the "manufacture, sale, keeping for sale or giving away of any cigarettes or any imitation thereof composed in whole or in part of tobacco or any substance in the form of the cigarette containing narcotic elements; or any rice paper or any paper designed for cigarette wrappers."

The new tobacco law in force in Oregon provides that "it shall be unlawful to sell, barter, trade, give, or in any manner furnish to any minor under the age of 18 years any tobacco, cigars or cigarettes in any form, or any compound in which tobacco forms a component part, without written consent or order of such minor's parents or guardian, then in that case consent may be given by the county court, sitting for the transaction of county business, upon proper application in the county in which said minor may have his residence."

Tobacco blindness, it is said, is becoming a common affliction. At present there are several persons under treatment for it at one London hospital. It takes the form of color blindness, the sufferers who have smoked themselves into this condition being quite unable to distinguish the color of a piece of red cloth held up before them. Sometimes the victim loses his sight altogether. Tobacco being a narcotic, naturally benumbs the nerves. When the nerves are thus benumbed people do not see as distinctly, and this defectiveness of vision tends to increase and become permanent.—*Exchange*.

At a hearing before the Committee of Education of the Michigan Legislature on the subject of the effects of tobacco on youths, it was stated that in reply to circulars two hundred doctors had each cited cases of boys being dwarfed, made insane, killed, or rendered incapable of speech. The professors of Michigan University testified that otherwise bright students were made dull and stupid by the use of the cigarette, and that in many cases the power of hearing had been seriously affected. They also said that in nine cases out of ten the regular use of cigarettes by boys would result in the loss of will power.

Rev. J. M. Buckley, editor of the New York *Christian Advocate*, when traveling abroad, in an interesting letter descriptive of Spanish customs and people, says:—"Smoking must be classed among Spanish amusements. The people are the most persistent and excessive smokers in the world. Little boys of eight or ten years of age smoke, and in all places, except the church, men are constantly smoking. They pay no regard to the presence of women. Few compartments on the trains, even *first-class*, are reserved for the use of non-smokers; but everywhere fumes arise. The Spaniard smokes while he is shaving, when he is in the opera, and when in his place in the Cortes. On health the effect is very bad. It is very difficult to find Spaniards who have not some malady. Dyspepsia is common, also nervous diseases and fits of various sorts. It is my belief that the effect of the Madrid climate in producing '*pulmonics*' is much to be attributed to the incessant smoking of the people, as well as to the fact that they have no proper provision against sudden changes."

THE BRAIN DURING SLEEP.

Sleep, Claude Bernard remarks, "is rightly considered the state of rest of the cerebral organ;" and he proceeds to give the following interesting account of the experiments by which it had been proved that sleep is not the result of compression produced by the accumulation of blood in the brain, as was commonly believed until within a few years.

It has been shown by direct experiment that, during sleep, the brain, instead of being congested, is on the contrary pale and bloodless; while in a state of wakefulness the circulation, becoming more active, provokes a flow of blood proportioned to the intensity of cerebral activity. In this respect, natural sleep and the anesthetic sleep of chloroform are alike; in both cases the brain, sunk into rest or inactivity, presents the same paleness and relative bloodlessness.

The experiment is made in this manner: A part of the bony covering of an animal's skull is carefully removed, and the brain laid bare, so as to study the circulation at the surface of this organ. Then chloroform is administered to produce insensibility. In the first exciting stage of the action of the chloroform the brain is observed to grow congested and to lap over at the edges; but as soon as the stage of anesthetic sleep is reached, the substance of the brain sinks in and grows paler, presenting a languid movement of capillary circulation, which lasts as long as the state of sleep or cerebral rest continues. For the study of the brain in natural sleep, a circular trepan is made on a dog's head, and the piece of bone removed is replaced by a watch-glass carefully adjusted to the exact opening, so as to prevent the irritating action of the air. The animals subjected to the operation survive it; and observations on their brain thro this sort of window, while awake and when asleep, prove that when the dog is asleep the brain is always paler, and that a fresh afflux of blood is regularly noticed on his awaking, when the functions of the brain resume their activity. Facts analogous to those observed in animals have been studied directly in the human brain. On a person injured by a frightful railroad accident, the effect of a considerable loss of brain-substance was examined. The brain was visible over a surface of three by six inches. The patient suffered frequent and severe attacks of epilepsy and coma, during which the brain invariably expanded. Sleep succeeded these attacks, and the cerebral hernia gradually subsided. When the patient awoke, the brain again projected and rose to the level of the surface of the external bony table. In the case of another person, injured in consequence of a fracture of the skull, the cerebral circulation was studied during the administration of anesthetics. With the first inhalations, the surface of the brain became branchy and filled with blood; the flow of blood and throbbing of the brain increased, and then, at the instant of sleep, its surface subsided by degrees below the opening, while at the same time growing relatively pale and bloodless.

Briefly, then, the brain is governed by the common law that controls blood-circulation in all the organs. By virtue of this law, when the organs are at rest and their action suspended, the circulation in them grows languid; and it increases, on the contrary, as soon as activity is resumed.—*Boston Journal of Chemistry.*

As the result of the work done by the Michigan Stove Company, of Detroit, in testing and applying aluminum additions to iron in making castings, they were the recipients of many letters containing inquiries, etc. They have made arrangements with a producer of aluminum, who makes about 50 pounds a day, to supply the metal to purchasers at \$5 per pound. The quality of the metal has steadily improved. One of the first lots contained 95.5 per cent aluminum, 1.62 silicon, and 2.88 iron. Another lot showed by analysis 96.35 per cent of aluminum, 2.16 per cent of silver, 1.47 per cent of iron, and 0.02 of copper. A few days since a 50-pound lot just received carried 98.34 of aluminum, 1.34 silicon, and 0.32 iron. At first considerable trouble was experienced in endeavoring to roll the metal, but now it is rolled to any thickness. The Michigan Stove Company has recently received some foil, and also a quantity rolled to No. 8 Brown & Sharp gage. They are ready to supply it from $\frac{1}{2}$ inch down. They attain good results down to 0.005 inch in plates 9 inches wide. The Michigan Stove Company certainly deserve credit for the energy which they have displayed. They have done more than any one to bring the properties of aluminum into public notice, and are instrumental in bringing the price down to a point where the metal can come into general use.—*Iron Age.*

An Ideal for Young Man.—I rejoice to say I was brought up from my youth to abstain from tobacco. It is unhealthy; it is filthy from beginning to end. I believe the day will come when a young man will be proud of not being addicted to the use of stimulants of any kind. I believe the day will come when *not to drink*, not to use tobacco, not to waste one's strength in the secret indulgence of passion, but to be true to one's nature, and true to God's law, to be sound, robust, cheerful, and to be conscious that these elements of health and strength are derived from the reverent obedience of the commandments of God, will be a matter of ambition and endeavor among men.—*Beecher.*

Cleansing and Smoothing Palatine Surface of Rubber Plates.—After removing a rubber plate from the flask, it is to be cleaned, which can be much facilitated by using a small wire brush. All the plaster and roughness can be readily removed from the palatine surface where it is difficult to reach with any other instrument. The brush should be made of very fine brass wires, bound together with a stout wire (like the file-cleaner), in a bundle not exceeding an eighth of an inch in diameter. This is a convenient instrument in the laboratory for other purposes, and a trial will insure its use.—B. M. WILKERSON, in *American Journal of Dental Science.*

Cementing Metal to Glass.—Take two parts finely-powdered white litharge, and one part dry white lead, mix intimately, and work up with boiled linseed oil and lac copal to a stiff dough. One part of copal is taken to three parts of boiled oil, and enough litharge and white lead added to make a dough similar to putty. The underside of the metal is filled with the cement, and then prest upon the glass, the excess of cement being scraped off with any sort of instrument.—*Journal of Applied Chemistry.*